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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,618	04/07/2004	Yadong Huang	UCAL-217CON	8516
24353 7590 02/27/2008 BOZICEVIC, FIELD & FRANCIS LLP 1900 UNIVERSITY AVENUE SUITE 200 EAST PALO ALTO, CA 94303				
EXAMINER				
PAK, MICHAEL D				
ART UNIT		PAPER NUMBER		
1646				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/820,618

Applicant(s)

HUANG ET AL.

Examiner

Michael Pak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-31 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1448 or PTO-889)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Election/Restrictions

- I. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-6, 23-24, 28, and 31, drawn to a method of inhibiting formation of neurofibrillary tangles in an individual said method comprising reducing formation of a truncated form of apoE, classification dependent upon agent structure.
 - II. Claims 7-11, drawn to a transgenic non-human animal, classified in class 800, subclass 9.
 - III. Claims 12-13 and 15-16, drawn to a method of screening for biologically active agents that modulate a phenomenon associated with Alzheimer's disease (AD) comprising using a non-human transgenic animal, classified in class 800, subclass 9.
 - IV. Claims 12-16, drawn to a method of screening for biologically active agents that modulate a phenomenon associated with Alzheimer's disease (AD) comprising using a cell in vitro, classified in class 435, subclass 7.2.
 - V. Claims 17-20, drawn to an isolated cell comprising a nucleic acid molecule that comprises a nucleotide sequence that encodes a carboxyl-terminal truncated form of apoE, classified in class 536, subclass 23.1, for example.
 - VI. Claims 21 and 22, drawn to a method of inhibiting formation of neurofibrillary tangles in an individual, the method comprising inhibiting interaction of carboxyl-

terminal truncated form of apoE with other components of a neurofibrillary tangle, classification dependent upon agent structure.

- VII. Claim 26, drawn to a method of treating Alzheimer's disease the method comprising assaying for the presence of carboxyl-terminal truncated apoE in a neuronal cell and administering an inhibitor, classification dependent upon agent structure.
- VIII. Claims 25, 27, and 29-30, drawn to pharmaceutical compositions and kits comprising same, classification dependent upon inhibitor structure.

The inventions are distinct, each from the other because of the following reasons:

Although there are no provisions under the section for "Relationship of Inventions" in M.P.E.P. § 806.05 for inventive Inventions that are directed to different methods, restriction is deemed to be proper because these methods appear to constitute patentably distinct inventions for the following reasons: Inventions I, III, IV, VI, and VII are directed to methods that are distinct both physically and functionally, and are not required one for the other. Invention I requires search and consideration of reducing formation of a truncated form of apoE, which is not required by any of the other Inventions. Invention III-IV requires search and consideration of a screening assay using a non-human transgenic animal, which is not required by any of the other Inventions. Invention VII requires search and consideration of inhibiting interaction of carboxyl-terminal truncated form of apoE with other components of a neurofibrillary tangle, which is not required by any of the other Inventions. Invention VIII requires search and consideration of

assaying for the presence of carboxyl-terminal truncated apoE, which is not required by any of the other Inventions

Although there are no provisions under the section for "Relationship of Inventions" in M.P.E.P. § 806.05 for inventive groups that are directed to different products, restriction is deemed to be proper because these products constitute patentably distinct inventions for the following reasons. Inventions II, V, and VIII are directed to products that are distinct both physically and functionally, are not required one for the other, and are therefore patentably distinct. The isolated polypeptide of Invention II is independent and distinct from the products of Inventions V and VIII because neither is required to make or use the transgenic non-human animal of Invention II. Although the isolated cell of Invention V can be obtained from the non-human transgenic animal of Invention II it can also be made in materially different methods, such as transfection of a cell line with a vector. Additionally, the pharmaceutical compositions and kit of Invention VIII is not required to make or use the isolated cell of Invention IV. The pharmaceutical compositions and kit of Invention VII are independent and distinct from the products of Inventions II and V because neither is required to make or use the pharmaceutical compositions and kit of Invention VIII.

Inventions II, and III and IV are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the processes for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the product as claimed can be used in a materially different

process of using that product. The transgenic non-human animal of Invention II can be used to study onset and progression of Alzheimer's disease (a disease model).

Inventions VIII and each of I and VII are related as product and processes of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the processes for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the product as claimed can be used in a materially different process of using that product. The pharmaceutical compositions and kit can be used to identify enzymes that catalyze the formation of carboxyl-terminal truncated apoE.

Inventions II and each of I, VI, and VII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions of Inventions II and each of I, VI, and VII are unrelated product and methods, wherein each is not required, one for another. For example, the claimed methods of Inventions I, VI, and VII do not recite the use or production of the non-human transgenic animal of Invention II.

Inventions V and each of I, III, IV, VI, and VII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions of Inventions V and each of I, III, IV, VI, and VII are unrelated product and methods, wherein each is not required, one for another. For example, the

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claimed methods of Inventions I, III, IV, VI, and VI do not recite the use or production of the isolated cell of Invention V.

Inventions VIII and each of III, IV and VI are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions of Inventions VIII and each of III, IV and VI are unrelated product and methods, wherein each is not required, one for another. For example, the claimed methods of Inventions III, IV and VI do not recite the use or production of the pharmaceutical compositions and kit of Invention VIII.

FURTHERMORE, restriction to one of the following inventions is required under 35 U.S.C. 121:

- A. Claims 1-31, each in part, as the inventions pertain to SEQ ID NO: 1.
- B. Claims 1-31, each in part, as the inventions pertain to SEQ ID NO: 2.
- C. Claims 1-31, each in part, as the inventions pertain to SEQ ID NO: 3.
- D. Claims 1-31, each in part, as the inventions pertain to SEQ ID NO: 4.

The inventions are distinct, each from the other because of the following reasons:

Although there are no provisions under the section for "Relationship of Inventions" in M.P.E.P. § 806.05 for inventive Inventions that are directed to different products, restriction is deemed to be proper because these products appear to constitute patentably distinct inventions for the following reasons: Inventions A, B, C, and D are directed to sequences that are distinct

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both physically and functionally, and are not required one for the other. Invention A requires search and consideration of SEQ ID NO: 1, which is not required by any of the other Inventions. Invention B requires search and consideration of SEQ ID NO: 2, which is not required by any of the other Inventions. Invention C requires search and consideration of SEQ ID NO: 3, which is not required by any of the other Inventions. Invention D requires search and consideration of SEQ ID NO: 4, which is not required by any of the other Inventions. Each sequence requires a separate search of the literature and sequence databases. A search and examination of an Invention as it pertains to all sequences would therefore present the examiner with an undue search burden.

Applicant is advised that this is not a requirement to elect a species. Rather, this is a second restriction requirement superimposed upon the requirement to elect one group from I-VIII. In order to be fully responsive, Applicant must elect one group from I-VIII and one group from A-D.

This application contains claims directed to the following patentably distinct species of the claimed invention:

- a. Alzheimer's disease
- b. Coronary Artery disease
- c. Head trauma
- d. Stroke

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 4 is generic.

If applicant selects Invention I, one species from the disorder group must be chosen to be fully responsive.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, separate search requirements, and/or different classification, restriction for examination purposes as indicated is proper.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the

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application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pak whose telephone number is 571-272-0879. The examiner can normally be reached on 8:00 - 2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Nickol can be reached on 571-272-083535. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Pak/
Primary Examiner, Art Unit 1646

14 February 2007

Application Number**Application/Control No.**

10/820,618

Examiner

Michael Pak

**Applicant(s)/Patent under
Reexamination**

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